U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Clean Energy for America's Future

The Office of Energy Efficiency and Renewable Energy (EERE) invests in clean energy technologies that strengthen the economy, protect the environment, and reduce dependence on foreign oil. EERE leverages partnerships with the private sector, state and local governments, DOE national laboratories, and universities to speed the adoption of new technologies in renewable energy, advanced vehicles and fuels, and energy efficiency.

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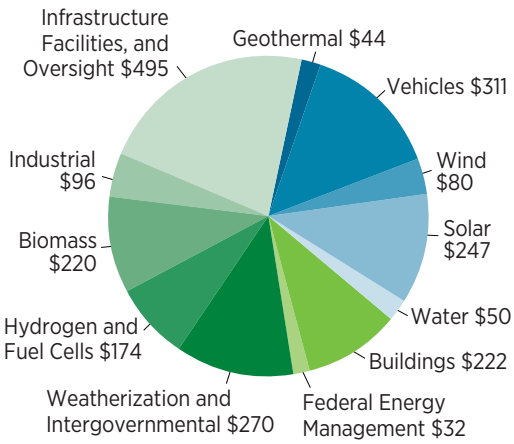
By partnering with industry, state and local governments, universities, and manufacturers, EERE plays a critical role in improving energy efficiency practices and increasing their adoption by American consumers, industry, and governments.

EERE Programs 2010 Budget
(in $ millions)



EERE operates with a budget of $2.2 billion (FY 2010) and is responsible for investing more than $16 billion from the American Recovery and Reinvestment Act of 2009.

Accelerate Renewable Energy Deployment

Biomass

Biomass—waste from biological material—is an abundant, renewable source for a variety of energy applications including biofuels, bioproducts, and biopower. Biomass energy can be derived from wood, agricultural residues, waste streams, or even energy crops that are high-yield variations grown specifically for energy applications.

The EERE Biomass Program is speeding the adoption of biomass products, which has a direct impact on reducing America's use of fossil fuels. The program is creating a balanced portfolio of research in biomass feedstocks and conversion technologies; ensuring that cellulosic ethanol (derived from plant material) is cost-competitive by 2012; and increasing the use of biofuels through infrastructure development.

Geothermal

Geothermal energy—the heat contained within the earth—is a clean, reliable, and renewable resource that can be used as a direct source of heat and to generate baseload electricity. EERE conducts research, development, and demonstration to establish this largely untapped yet sizable energy resource as a viable, cost-effective contributor for electric power generation.

Solar

The EERE Solar Energy Technologies Program is focused on increasing market penetration of solar energy technologies. The goal is to make solar power—including concentrated solar power (CSP) and photovoltaic systems (PV)— cost-competitive with grid electricity by 2015.

EERE works to improve the reliability and lower the costs of components and systems, integrate systems to connect solar technologies, and reduce barriers to solar power in the marketplace.

Water

Conventional hydropower serves as the foundation of the U.S. renewable energy portfolio, representing approximately 7% of total U.S. electricity generation. Water-power technologies can be deployed near densely populated load centers as well as for remote power applications. In addition, the electricity produced from these resources is easily forecast.

EERE invests in innovative technologies capable of generating renewable, environmentally responsible, and cost-effective electricity from water sources that can be connected to the power grid. Sources include marine (ocean thermal) and hydrokinetic (wave, tidal, ocean, and river current) energies, and conventional hydropower dams.

Wind

Wind power is clean, domestic, renewable energy that can help the U.S. meet its pressing environmental and economic challenges while meeting the ever-increasing demands for electricity. Wind power generates emissions-free electricity with tangible carbon emission reductions, reductions in water use by electric-generating facilities, increased tax bases for local governments, and increased jobs—especially in the construction and manufacturing sectors.

Promote Advanced Fuels and Vehicles

Fuel Cells

Fuel cells are a highly efficient and flexible technology for producing power and heat—offering cleaner, more efficient alternatives to the combustion of gasoline and other fossil fuels. The scalability of fuel cells offers significant benefits for a wide range of applications, including specialty vehicles (such as forklifts), distributed power systems, automobiles, buses, auxiliary power units, and portable electronics.

Reliable, low-cost, high-performance fuel cell system components have the potential to significantly improve performance and reliability while lowering fossil fuel consumption and carbon emissions. EERE focuses on overcoming technical barriers to achieve commercial success in these areas.

Vehicles

With the goal of enabling Plug-in Hybrid Electric Vehicles (PHEVs) that can provide the majority of Americans with an all-electric daily commute, EERE is focused on improving the performance and durability of batteries, while lowering their cost. EERE also supports research and development to improve efficiency of today's vehicles, and the use of alternative and renewable fuels.

Through the American Recovery and Reinvestment Act, EERE is making significant new investments in the domestic manufacturing base for advanced batteries, as well as electric drive components, drive trains, and transportation electrification.

Improve Energy Efficiency Practices

Buildings

EERE is focused on achieving cost savings and improved comfort for American homeowners and businesses.

The Building Technologies Program is leading the way to achieving high-efficiency, low-energy buildings through technology research and development, energy codes, public awareness, and energy alliances with the private sector.

Federal Energy Management

EERE is enhancing the environmental stewardship of the federal government and positioning it as a leading example of energy efficiency.

The Federal Energy Management Program (FEMP) helps implement sound, cost-effective energy management and investment practices to enhance the nation's energy security and environmental stewardship. The program helps federal agencies meet federal laws and regulations surrounding energy efficiency, renewable energy, water efficiency, and carbon emissions within its operations, facilities, and vehicle fleets.

In addition, FEMP assists federal agencies in securing alternative financing to fund energy projects, such as energy savings performance services contracts, power purchase agreements, and energy incentive programs.

Industry

EERE leads the national effort to save energy and reduce carbon emissions in industrial manufacturing—the largest energy-using sector of the U.S. economy. EERE's activities help U.S. industries increase their global competitiveness, which keeps jobs in America and reduces reliance on foreign oil and other imports.

Weatherization and Intergovernmental

The Weatherization and Intergovernmental Program (WIP) provides funding and technical assistance to state and local governments, community action agencies, utilities, Indian tribes, and overseas U.S. territories to assist them with their renewable energy and energy efficiency programs. The program develops information products, tools, and market transformation activities that address barriers to a more energy efficient economy.

The Weatherization Assistance Program—an integral program area of WIP—provides funding to states to reduce energy costs for low-income households.

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